



Testing Evolutionary Theory of Household Consumption Behavior in the case of Novelty

Kenza El Qaoumi, Pascal Le Masson, Benoit Weil

► To cite this version:

Kenza El Qaoumi, Pascal Le Masson, Benoit Weil. Testing Evolutionary Theory of Household Consumption Behavior in the case of Novelty. 15th ISS Conference, Jul 2014, Jena, Germany. hal-01082519

HAL Id: hal-01082519

<https://hal.science/hal-01082519>

Submitted on 13 Nov 2014

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Testing Evolutionary Theory of Household Consumption Behavior in the case of Novelty

Kenza El Qaoumi ⁽¹⁾, Pascal Le Masson ⁽¹⁾, Benoit Weil ⁽¹⁾

MINES Paristech, CGS - center for management science.

1 Evolutionary theory applied to consumer behavior

Neoclassical theory	Evolutionary theory
- Ignores Novelty and uncertainties	- Considers Novelty and Uncertainties
- Household have well defined preferences	- Consumer behavior is in continuous change
	- Changes involve learning

⚠ **Evolutionary theory** follow the Lancasterian point of view concerning **Novelty**. However, **Evolutionary approach** might be compatible with novelty processes, i.e. with the emergence of new Lancasterian characteristics.

⚠ The emergence of new goods characteristics implies and requires **learning**

2 Hypothesis:

H1: Novelty: the set of goods characteristics evolve over time, contrary to Lancasterian approach

H2: Learning involves interdependence between New good characteristics

3 Research methodology Model

Good (G) = Set {C1; C2; ...Cn}
 $f(t) : G \rightarrow$ Temporal Continuity
 $Gt/G't \rightarrow$ Comparison inter product

Good (G) = Set {C1; C2; ...Cn}
 "G" \rightarrow Sample of product
 "C" \rightarrow consumer preferences

4 Data Collection from:

Consumer Guides : Reports & Tests 1960-2013

Interviews	Nbr of consumer Guides viewed	Data Source	Consumer Products	Period of time
4 Meetings with consumer guides Experts: 1. Validate and reinforce the quality of our tool. 2. Crosscoding and validate the newness of characteristics	1960 – 2013 \rightarrow 12*(nbr of years) \rightarrow 636 Consumer Guides journals	« Que Choisir? »	Iron	1962 - 2013
		« Que Choisir? »	Vacuum Cleaner	1969 - 2013
		« Que Choisir? »	Toothbrush	1975 - 2013
		« Que Choisir? »	Mobile Phone	1996 - 2013
		« Que Choisir? »	GPS	2007 - 2013

5 Results:

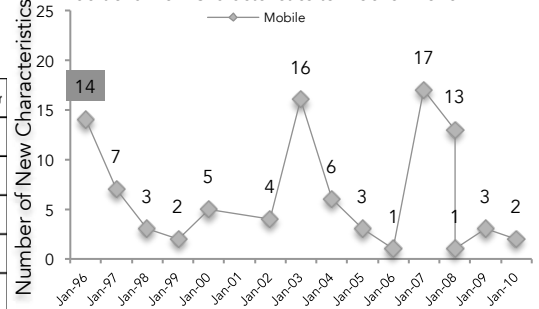
A. Novelty: Characteristics space of goods is permanently in evolution

✓ In all five cases, the characteristics space of the different goods is permanently in evolution, by the addition of **new characteristics** over time.

	Period of time	Nbr of years	Nbr of consumer guide surveys	Total nbr of new characteristics	New characteristics per Year
Mobile Phone	1996 - 2013	17	16	97	6
Iron	1962 - 2013	51	21	78	2
Vacuum cleaner	1969 - 2013	44	25	75	2
Toothbrush	1975 - 2013	38	6	26	1
GPS	2007 - 2013	6	8	20	3

Example Mobile Phone

Additional new Characteristics to Mobile Phone



B. Learning: Continuous learning, new characteristics are not independent

- Identification of waterfall process between new characteristics that highlight the learning effect

6 Discussion:

- Review the Lancasterian Approach of **Novelty**.
- Extension of characteristics space of different goods \rightarrow Mobile phone (young dynamic) but also Iron (Old product)
- The gap between evolutionary consumption theory, the emergence of new Lancasterian characteristics.